

IN THE CLAIMS

1. (currently amended) A method of exchanging information between devices to permit subsequent wireless communication between the devices, said method comprising:

establishing an primary electrical connection between a first primary device and a second primary device;

generating, a first number of communication specification information portions at the first primary device and a second number of communication specification information portions at the second primary device, each of the first number of communication specification information ~~that~~ portions including information that is to be included in subsequent wireless communication between the first primary device and ~~the~~ a given secondary device, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device; and

associating a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first plurality of secondary devices;

associating a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices;

associating a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

sending, ~~the communication specification information~~ from the first primary device to ~~the second device~~ via the primary electrical connection when the number of devices in the first plurality of secondary devices exceeds the first number, an inquiry as to whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices; and

associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

2. (currently amended) The method according to claim 1, wherein each of the first number of communication specification information portions includes identification information identifying a characteristic of at least one of the first primary device, and each of the second number of communication specification information portions includes identification information identifying a characteristic of the second primary device.

3. (currently amended) The method according to claim

1, wherein each of the first number of communication specification information portions and each of the second number of communication specification information portions includes an associated predetermined password.

4. (previously presented) The method according to claim 3, wherein the predetermined password includes a random number.

5. (currently amended) The method according to claim 1, wherein each of the first number of communication specification information portions includes information indicating a communication frequency to be used during the subsequent wireless communication between the first primary device and the given secondary device, and each of the second number of communication specification information portions includes information indicating a communication frequency to be used during the subsequent wireless communication between the second primary device and the another given secondary device.

6. (currently amended) The method according to claim 1, wherein each of the first number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between the first primary device and the given secondary device, and each of the second number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between the second primary device and the another given secondary device.

7. (currently amended) The method according to claim 1, ~~wherein the second device is one of a plurality of second devices, said establishing step includes further comprising:~~

~~establishing electrical connections one at a time between the first device and each one of the plurality of second devices to form a plurality of successive~~ secondary electrical

connections, one at a time, between the first primary device and a corresponding each one of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number;

establishing a plurality of successive secondary electrical connections, one at a time, between the first primary device and each one of the first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number;~~said generating step includes generating, at the first device, associated communication specification information for each one of the plurality of second devices that includes information that is to be included in subsequent wireless communication between the first device and an associated use of the second devices, and~~

said sending step of associating a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices includes sending, from the first primary device to each one of the first plurality of secondary devices via its corresponding secondary electrical connection, the specific one of the first number of communication specification information portions associated with that second device via the corresponding electrical connection,
and

said step of associating a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices includes sending, from the first primary device to each one of the first portion of the first plurality of secondary devices via its corresponding secondary electrical connection, the specific one of the first number of communication specification information portions.

8. (currently amended) The method according to claim

1, wherein said establishing step includes:

providing a relay station,

establishing a first electrical connection between the first primary device and the relay station, and

establishing a second electrical connection between the second primary device and the relay station; and

said sending step includes sending the inquiry communication specification information from the first primary device to the second primary device via the first electrical connection, the relay station, and the second electrical connection or to the relay station via the first electrical connection.

9. (currently amended) The method according to claim 8, wherein said sending step of associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices ~~further~~ includes:

receiving, sending at the first primary device, the further specific one of the second number of communication specification information portions from the first-second primary device to or from the relay station via the first electrical connection;

holding the communication specification information in a buffer of the relay station,

sending the further specific one of the second number of communication specification information portions from the buffer-first primary device to the at least one of the second portion of the first plurality of secondary devices via the a secondary electrical connection; and

notifying the first-second primary device, via the first electrical connection, that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second

portion of the first plurality of secondary devices~~sent to the second device.~~

10. (cancelled)

11. (currently amended) The method according to claim 8, further comprising:

storing the communication specification information portion associated with the at least one of the second portion of the first plurality of secondary devices in the relay station.

12. (currently amended) A system for exchanging information between devices to permit subsequent performance of wireless communication between the devices, the system comprising:

a first primary device~~having a first connector; and~~
a second primary device; and~~having a second connector,~~
~~said second connector being detachably coupled to said first connector~~

a primary connection unit operable to form~~provide~~ an electrical connection between said first primary device and said second primary device;

said first primary device further ~~comprising~~
including:

a generating unit operable to generate a first number of communication specification information portions each that
~~including~~ information that is to be included in subsequent wireless communication between said first primary device and ~~said a given secondary device, and~~

an associating unit operable to associate a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number,
the first primary device thereby being operable to carry out

wireless communication with each one of the first plurality of secondary devices, and to associate a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices; and

said second primary device including:

a generating unit operable to generate a second number of communication specification information portions, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device, and

an associating unit operable to associate a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

said first primary device further including:

a sending unit operable to send an inquiry as to whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices ~~the communication specification information from said first device to said second device via the electrical~~ said primary connection unit when the number of devices in the first plurality of secondary devices exceeds the first number; and

said associating unit of said second primary device being further operable to associate a further specific one of the second number of the communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

13. (currently amended) The system according to claim 12, wherein each of the first number of communication specification information portions includes identification information identifying a characteristic of at least one of the first primary device, and each of the second number of communication specification information portions includes identification information identifying a characteristic of the second primary device.

14. (currently amended) The system according to claim 12, wherein each of the first number of communication specification information portions and each of the second number of communication specification information portions includes an associated predetermined password.

15. (previously presented) The system according to claim 14, wherein the predetermined password includes a random number.

16. (currently amended) The system according to claim 12, wherein each of the first number of communication specification information portions includes information indicating a communication frequency to be used during the subsequent wireless communication between said first primary device and the given secondary device, and each of the second number of communication specification information portions

includes information indicating a communication frequency to be used during the subsequent wireless communication between said second primary device and the another secondary device.

17. (currently amended) The system according to claim 12, wherein each of the first number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between said first primary device and the given secondary device, and each of the second number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between said second primary device and the another secondary device.

18. (currently amended) The system according to claim 12, further comprising:~~a plurality of second devices each having a respective secondary connector, said first connector being connectable one at a time to the second connector of each of the plurality of second devices operable to form provide a plurality of successive electrical connections, one at a time, between said first primary device and a corresponding each one of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number or between the first primary device and each one of the first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, wherein said generating unit is operable to generate associated communication specification information for each one of said plurality of second devices that includes information that is to be included in subsequent wireless communication between said first device and an associated one of said second devices; and~~

said sending unit is operable to send, to each one of

said first plurality of secondary devices or to each one of the first portion of the first plurality of secondary devices via its corresponding electrical connection, the specific one of the first number of communication specification information portions ~~associated with that second device via the corresponding electrical connection.~~

19. (currently amended) The system according to claim 12, wherein said primary connection unit includes: ~~further comprising:~~

a relay station having a first relay station connector ~~detachably coupled to said first connector of said first primary device~~ to form a first electrical connection between said first primary device and said relay station, and having a second relay station connector ~~detachably coupled to said second connector of said second primary device~~ to form a second electrical connection between said second primary device and said relay station; ~~wherein~~

said sending unit being ~~is~~ operable to send the inquiry communication specification information from said first device to said second primary device via the first electrical connection, said relay station and the second electrical connection or to said relay station via the first electrical connection.

20. (currently amended) The system according to claim 19, wherein said first primary device ~~relay station~~ includes a receiving unit buffer ~~and is further operable to receive~~ ~~hold~~ the further specific one of the second number of communication specification information portions ~~sent from said second primary first device or from said relay station in said buffer, and said sending unit of said first primary device is further operable to send the further specific one of the second number of communication specification information portions from said buffer to at least one of the second portion of the first~~

plurality of said secondary devices via the a secondary electrical connection, and to notify said ~~first~~ second primary device via the first electrical connection that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second portion of the first plurality of secondary devices ~~sent to said second device.~~

21. (cancelled)

22. (currently amended) The system according to claim 19, wherein said relay station is further operable to store the communication specification information portion associated with the at least one of the second portion of the first plurality of secondary devices.

23. (currently amended) A computer-readable recording medium recorded with a program for carrying out a method of exchanging information between devices to permit subsequent wireless communication between the devices, said method comprising:

establishing ~~a~~ primary electrical connection between a first primary device and a second primary device;

generating a first number of communication specification information portions at the first primary device and a second number of communication specification information portions at the second primary device, each of the first number of communication specification information that portions including ~~information~~ information that is to be included in subsequent wireless communication between the first primary device and the a given secondary device, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device; and

associating a specific one of the first number of

communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first plurality of secondary devices;

associating a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices;

associating a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

sending, ~~the communication specification information from the first primary device to the second device~~ via the primary electrical connection when the number of devices in the first plurality of secondary devices exceeds the first number, an inquiry as to whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices; and

associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification

information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

24. (currently amended) The computer-readable recording medium according to claim 23, wherein each of the first number of communication specification information portions includes identification information identifying a characteristic of at least one of the first primary device, and each of the second number of communication specification information portions includes identification information identifying a characteristic of the second primary device.

25. (currently amended) The computer-readable recording medium according to claim 23, wherein each of the first number of communication specification information portions and each of the second number of communication specification information portions includes an associated predetermined password.

26. (previously presented) The computer-readable recording medium according to claim 25, wherein the predetermined password includes a random number.

27. (currently amended) The computer-readable recording medium according to claim 23, wherein each of the first number of communication specification information portions includes information indicating a communication frequency to be used during the subsequent wireless communication between the first primary device and the given secondary device, and each of the second number of communication specification information portions includes information indicating a communication frequency to be used during the subsequent wireless communication between the second primary device and the another given secondary device.

28. (currently amended) The computer-readable recording medium according to claim 23, wherein each of the first number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between the first primary device and the given secondary device, and each of the second number of communication specification information portions includes information indicating a wireless channel to be used during the wireless communication between the second primary device and the another given secondary device.

29. (currently amended) The computer-readable recording medium according to claim 23, ~~wherein the second device is one of a plurality of second devices, said establishing step includes further comprising:~~

~~establishing electrical connections one at a time between the first device and each one of the plurality of second devices to form a plurality of successive secondary electrical connections, one at a time, between the first primary device and a corresponding each one of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number;~~

establishing a plurality of successive secondary electrical connections, one at a time, between the first primary device and each one of the first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number;~~said generating step includes generating, at the first device, associated communication specification information for each one of the plurality of second devices that includes information that is to be included in subsequent wireless communication between the first device and an associated use of the second devices, and~~

said sending associating step includes sending, from

the first primary device to each one of the first plurality of secondary devices or to each one of the first portion of the first plurality of secondary devices via its corresponding secondary electrical connection, the specific one of the first number of communication specification information portions ~~associated with that second device via the corresponding electrical connection.~~

30. (currently amended) The computer-readable recording medium according to claim 23, wherein said determining establishing step includes:

providing a relay station,
establishing ~~determining whether a first electrical connection is present between the first primary device and a the~~ relay station, and

establishing ~~determining whether a second electrical connection is present between the second primary device and the~~ relay station; and

said sending step includes sending, ~~when the first electrical connection and the second electrical connection are present,~~ the inquiry communication specification information from the first primary device to the second primary device via the first electrical connection, the relay station, and the second electrical connection or to the relay station via the first electrical connection.

31. (currently amended) The computer-readable recording medium according to claim 30, wherein said sending step of associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices ~~further~~ includes:

receiving, sending at the first primary device, the further specific one of the second number of communication specification information portions from the ~~first~~ second primary

~~device to or from the relay station via the first electrical connection;~~

~~holding the communication specification information in a buffer of the relay station,~~

sending the further specific one of the second number of communication specification information portions from the buffer first primary device to the at least one of the second portion of the first plurality of secondary devices via ~~the a~~ secondary electrical connection; and

notifying the ~~first second primary device, via the first electrical connection,~~ that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second portion of the first plurality of secondary devices ~~sent to the second device.~~

32. (cancelled)

33. (currently amended) The computer-readable recording medium according to claim 30, wherein said method further comprises:

storing the communication specification information portion associated with the at least one of the second portion of the first plurality of secondary devices in the relay station.

34. (cancelled)

35. (currently amended) The method according to claim ~~17~~, further comprising:

verifying, at the first primary device, that the specific one of the first number of communication specification information portions has been correctly received by ~~the that~~ secondary device.

36. (currently amended) The method according to claim ~~17~~, further comprising:

removing the secondary electrical connection prior to initiating the wireless communication between the first primary device and ~~the~~ a particular one of the first plurality of secondary devices or a particular one of the first portion of the first plurality of secondary devices.

37. (cancelled)

38. (currently amended) The method according to claim 47, further comprising:

sending ~~the~~ a first random number from the first primary device to a particular one of the first plurality of secondary devices via the corresponding secondary connection;

receiving, at the first primary device, a second random number from the particular one of the first plurality of secondary devices; ~~back to the first device, and~~

verifying, at the first primary device, that the first random number ~~received from the second device~~ is identical to the second random number ~~sent to the second device~~.

39. (cancelled)

40. (cancelled)

41. (cancelled)

42. (currently amended) The system according to claim 1218, wherein said first primary device includes further comprises:

a verifying unit operable to verify that the specific one of the first number of communication specification information portions has been correctly received by the secondary device.

43. (currently amended) The system according to claim 1218, wherein:

said ~~first~~ secondary connector is detached from ~~said~~ the first plurality of secondary connector devices prior to initiating the wireless communication between said first primary device and ~~said~~ a particular one of the first plurality of

secondary devices or a particular one of the first portion of the first plurality of secondary devices.

44. (cancelled)

45. (cancelled)

46. (currently amended) The system according to claim ~~15~~18, wherein said ~~second device includes a~~ sending unit of said first primary device is operable to send the a first random number to a particular one of the first plurality of secondary devices via said corresponding secondary connection; and

said first primary device includes:

a receiving unit operable to receive a second random number from said that secondary device back to said first device, and said first device includes

a verifying unit operable to verify that the first random number received from said second device is identical to the second random number sent to said second device.

47. (cancelled)

48. (cancelled)

49. (cancelled)

50. (cancelled)

51. (cancelled)

52. (currently amended) The computer-readable recording medium according to claim ~~23~~29, wherein said method further comprises:

verifying, at the first primary device, that the specific one of the first number of communication specification information portions has been correctly received by the that secondary device.

53. (currently amended) The computer-readable recording medium according to claim ~~23~~29, wherein said method further comprises:

removing the secondary electrical connection prior to initiating the wireless communication between the first primary

device and ~~the~~ a particular one of the first plurality of secondary devices or a particular one of the first portion of the first plurality of secondary devices.

54. (cancelled)

55. (currently amended) The computer-readable recording medium according to claim ~~26~~29, wherein said method further comprises:

sending the a first random number from the first primary device to a particular one of the first plurality of secondary devices via the corresponding secondary connection;

receiving, at the first primary device, a second random number from the particular one of the first plurality of secondary devices; ~~back to the first device,~~ and

verifying, at the first primary device, that the first random number ~~received from the second device~~ is identical to the second random number sent to the second device.

56. (cancelled)

57. (cancelled)

58. (cancelled)

59. (cancelled)

60. (cancelled)

61. (cancelled)

62. (cancelled)

63. (cancelled)

64. (cancelled)

65. (cancelled)

66. (cancelled)

67. (new) The method according to claim 1, wherein said step of associating the specific one of the communication specification information portions stored at the second primary device with the at least one of a second portion of the first plurality of secondary devices includes:

associating a specific one of the communication

specification information portions stored at the second primary device with each one of the second portion of the first plurality of secondary devices when the sum of the number of devices in the second plurality of secondary devices and the number of devices in second portion of the first plurality of secondary devices does not exceed the second number.

68. (new) The system according to claim 12, wherein said associating unit of said second primary device is further operable to associate a specific one of the communication specification information portions stored at the second primary device with each one of the second portion of the first plurality of secondary devices when the sum of the number of devices in the second plurality of secondary devices and the number of devices in second portion of the first plurality of secondary devices does not exceed the second number.

69. (new) The computer-readable recording medium according to claim 23, wherein said step of associating the specific one of the communication specification information portions stored at the second primary device with the at least one of a second portion of the first plurality of secondary devices includes:

associating a specific one of the communication specification information portions stored at the second primary device with each one of the second portion of the first plurality of secondary devices when the sum of the number of devices in the second plurality of secondary devices and the number of devices in second portion of the first plurality of secondary devices does not exceed the second number.

70. (new) A method of exchanging information between devices to permit subsequent wireless communication between the devices, said method comprising:

providing a relay station,

establishing a first electrical connection between a

first primary device and the relay station, and

establishing a second electrical connection between a second primary device and the relay station;

generating a first number of communication specification information portions at the first primary device and a second number of communication specification information portions at the second primary device, each of the first number of communication specification information portions including information that is to be included in subsequent wireless communication between the first primary device and a given secondary device, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device;

storing each of the first number of communication specification information portions and each of second number of communication specification information portions at the relay station;

associating a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first plurality of secondary devices;

associating a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices;

associating a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

sending, from the first primary device to the relay station via the first electrical connection when the number of devices in the first plurality of secondary devices exceeds the first number, an inquiry as to whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices; and

associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

71. (new) The method according to claim 70, wherein said step of associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices includes:

storing the further specific one of the second number of communication specification information portions in the relay station;

receiving, at the first primary device, the further specific one of the second number of communication specification

information portions from the relay station;

sending the further specific one of the second number of communication specification information portions from the first primary device to the at least one of the second portion of the first plurality of secondary devices via a secondary electrical connection; and

notifying the relay station that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second portion of the first plurality of secondary devices.

72. (new) A system for exchanging information between devices to permit subsequent performance of wireless communication between the devices, the system comprising:

a first primary device;

a second primary device; and

a relay station having a first relay station connector coupled to said first primary device to form a first electrical connection between said first primary device and said relay station, and having a second relay station connector coupled to said second primary device to form a second electrical connection between said second primary device and said relay station;

said first primary device including:

a generating unit operable to generate a first number of communication specification information portions each including information that is to be included in subsequent wireless communication between said first primary device and a given secondary device, and

an associating unit operable to associate a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first

plurality of secondary devices does not exceed the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first plurality of secondary devices and to associate a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices;

said second primary device including:

a generating unit operable to generate a second number of communication specification information portions, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device, and

an associating unit operable to associate a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

said relay station including:

a buffer operable to store each of the first number of communication specification information portions and each of second number of communication specification information portions;

said first primary device further including:

a sending unit operable to send an inquiry as to

whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices to said relay station when the number of devices in the first plurality of secondary devices exceeds the first number; and

said associating unit of said second primary device being further operable to associate a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

73. (new) The system according to claim 72, wherein said relay station is further operable to store the further specific one of the second number of communication specification information portions, said first primary device includes a receiving unit operable to receive the communication further specific one of the second number of communication specification information portions from said relay station, and said sending unit of said first primary device is further operable to send the further specific one of the second number of communication specification information portions to at least one of the second portion of the first plurality of secondary devices via a secondary electrical connection and to notify said relay station that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second portion of the first plurality of secondary devices.

74. (new) A computer-readable recording medium recorded with a program for carrying out a method of exchanging

information between devices to permit subsequent wireless communication between the devices, said method comprising:

providing a relay station,

establishing a first electrical connection between a first primary device and the relay station, and

establishing a second electrical connection between a second primary device and the relay station;

generating a first number of communication specification information portions at the first primary device and a second number of communication specification information portions at the second primary device, each of the first number of communication specification information portions including information that is to be included in subsequent wireless communication between the first primary device and a given secondary device, each of the second number of communication specification information portions including information that is to be included in subsequent wireless communication between the second primary device and another given secondary device;

storing each of the first number of communication specification information portions and each of second number of communication specification information portions at the relay station;

associating a specific one of the first number of communication specification information portions with each one of a first plurality of secondary devices when the number of devices in the first plurality of secondary devices does not exceed the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first plurality of secondary devices;

associating a specific one of the first number of communication specification information portions with each one of a first portion of the first plurality of secondary devices when the number of devices in the first plurality of secondary

devices exceeds the first number, the first primary device thereby being operable to carry out wireless communication with each one of the first portion of the first plurality of secondary devices;

associating a specific one of the second number of communication specification information portions with each one of a second plurality of secondary devices when the number of devices in the second plurality of secondary devices does not exceed the second number, the second primary device thereby being operable to carry out wireless communication with each one of the second plurality of secondary devices;

sending, from the first primary device to the relay station via the first electrical connection when the number of devices in the first plurality of secondary devices exceeds the first number, an inquiry as to whether any of the second number of communication specification information portions is not associated with one of the second plurality of secondary devices; and

associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices when that communication specification information portion is not associated with one of the second plurality of secondary devices, the second primary device thereby being further operable to carry out wireless communication with the at least one of the second portion of the first plurality of secondary devices.

75. (new) The computer-readable recording medium according to claim 74, wherein said step of associating a further specific one of the second number of communication specification information portions with at least one of a second portion of the first plurality of secondary devices includes:

storing the further specific one of the second number

of communication specification information portions in the relay station;

receiving, at the first primary device, the further specific one of the second number of communication specification information portions from the relay station;

sending the further specific one of the second number of communication specification information portions from the first primary device to the at least one of the second portion of the first plurality of secondary devices via a secondary electrical connection; and

notifying the relay station that the further specific one of the second number of communication specification information portions has been associated with the at least one of the second portion of the first plurality of secondary devices.